thereof in the case that the matching process between the design data and the SEM images takes place. In addition, the present invention performs the matching process between the edge images and the templates of the design data, and performs the matching process after re-registering the part of the SEM image corresponding to the detected position as the template. Therefore, a stable matching process with a high correlation value and a high detection ratio can be achieved.

Amend claim 1:

1. (Amended) A semiconductor inspection system, comprising:

a navigation system for storing semiconductor chip design information such as CAD data and for setting capturing and inspecting conditions including a region on a semiconductor wafer subject to inspection based on the design information; and

a scanning electron microscope system for performing an inspection by actually capturing the semiconductor wafer in accordance with the capturing and inspecting conditions set;

wherein the navigation system sets a template based on the design information, performs a matching process, by using the template, with respect to a pattern within an image provided by the scanning electron microscope system, and re-registers a portion of the image that corresponds to the template as a template.

Add new claims 24 and 25:

24. (New) A semiconductor inspection method by which a pattern within an image provided by a scanning electron microscope is determined by using a template that is registered in advance, the method comprising the steps of:

creating a template based on semiconductor chip design information such as CAD data;

detecting, by a pattern matching process, a position in an image provided by the scanning electron microscope which corresponds to the template; and

re-registering an image portion corresponding to the detected position as a template.

25. (New) A semiconductor inspection comprising:

a navigation system for registering a template used for a matching process for the identification of a portion of a semiconductor wafer subject to inspection; and

a scanning electron microscope system for forming an image based on the irradiation of the semiconductor wafer with an electron beam;

wherein the navigation system sets the template based on semiconductor chip design information such as CAD data, performs a matching process, by using the template, with respect to a pattern within an image provided by the scanning electron microscope system, and re-registers as a template a portion of the image that is detected by the matching process and which corresponds to the template.